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## Plane-wave and wave-packet neutrino oscillations in GR, $f(R)$ and in conformal coupling models

*Monday 6 June 2022 17:00 (15 minutes)*

Investigating neutrino flavor oscillations under the influence of curved spacetime is more involved when the mass eigenstates of the superposition- out of which each neutrino flavor is made- are taken to be wave packets. The subtleties behind applying the wave packet formalism to neutrino flavor oscillations in curved spacetimes, as opposed to the plane wave formalism, will be discussed. Applications to various spacetime metrics from GR and from modified gravity models are included. I will then expose, separately, the problem of neutrino flavor oscillations within conformal coupling models, both within the plane wave formalism and within the wave packet formalism.

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